

INTERNATIONAL SEARCH REPORT

International application No.
PCT/SE 2004/001477

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: C07D 473/20, C07D 473/22, A61K 31/52, A61K 31/522, A61P 25/28, A61P 35/00,
A61P 11/06, A61P 29/00 A61P 9/10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: C07D, A61K, A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

CHEM.ABS.DATA, EPO-INTERNAL, WPI DATA, BIOSIS, EMBASE, MEDLINE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	WO 03089430 A1 (ASTRAZENECA AB), 30 October 2003 (30.10.2003)	1-10
X	WO 9618400 A1 (EUROCELTIQUE, S.A.), 20 June 1996 (20.06.1996), page 5, line 23 - line 25; page 6 - page 7, the examples	1-10
X	Van Zyl, J.M. et al; Interaction of methylxanthines with myeloperoxidase. "An anti-inflammatory mechanism", International Journal of Biochemistry (1992), 24(6), 929-935	1-10



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search
25 January 2005

Date of mailing of the international search report
02-02-2005

Name and mailing address of the ISA/
Swedish Patent Office
Box 5055, S-102 42 STOCKHOLM
Facsimile No. +46 8 666 02 86

Authorized officer
PER RENSTRÖM/BS
Telephone No. +46 8 782 25 00

INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 2004/001477

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	STN International, File CAPLUS, CAPLUS accession no. 1968:434597, Document no. 69:34597, Dietz, Albert J. et al: "The hypnotic properties of 8-ethylthio-6-thiotheophylline sodium"; & Toxicology and Applied Pharmacology, 12, 202-6 (English) 1968 --	1-6
X	STN International, File CAPLUS, CAPLUS accession no. 1966:420839, Document no. 65:20839, Dietz, Albert J. et al: "The synthesis and pharmacologic evaluation of a series of 8-alkylthio-thiated theophyllines", & Journal of Medicinal Chemistry, 9(4), 500-6 (English) 1966 --	1-6
X	STN International, File CAPLUS, CAPLUS accession no. 1966:35888, Document no. 64:35888, Dietz, Albert J. et al: "Synthesis of some 8-alkylthio-2-thiotheophyllines and 8-alkylthio-6-thiotheophyllines"; & Journal of Medicinal Chemistry, 9(1), 160 (English) 1966 --	1-4
X	WO 02008237 A1 (LYKES, MARK, B.), 31 January 2002 (31.01.2002) --	1-4
X	STN International, File CAPLUS, CAPLUS accession no. 1974:82889, Document no. 80:82889, Reichman, Uri et al: "Tautomerism, ionization, and methylation of 2-(methylthio)- and 2,8-bis(methylthio)hypoxanthines"; & Journal of the Chemical Society, Perkin Transactions 1: organic and Bio-Organic Chemistry (1972-1999) (22), 2647-55 (English) 1973 --	1-4

INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 2004/001477

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	STN International, File CAPLUS, CAPLUS accession no. 1984:630460, Document no. 101:230460, Talukdar, P. B. et al: "Studies on ring-fused mesoionic thiazolo(3,2-a)imidazolo(4,5-d)pyrimidine derivatives"; & Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry, 23B(4), 316-20 (English) 1984 --	1-2
X	STN International, File Registry, "2H-Purin-2-one, 1,3,6,7-tetrahydro-8-(methylthio)-6-thioxo- (9CI)", Registry no. 500336-85-6 --	1,3
X	STN International, File Registry, "2-H-Purin-2-one, 1,3,6,7-tetrahydro-8-(propylthio)-6-thioxo-, sodium salt (9CI)", Registry no. 5784-48-5 --	1,3-4
X	STN International, File Registry, "1H-Purine-2,6-dithione, 3,7-dihydro-1,3-dimethyl-8-(methylthio)-, sodium salt (9CI)", Registry no. 5779-07-7 --	1,3-4
X	STN International, file Registry, "2H-Purin-2-one, 8-[(1-ethylbutyl)thio]-1,3,6,7-tetrahydro-1,3-dimethyl-6-thioxo-, sodium salt (9CI)", Registry no. 5779-06-6 -- -----	1,3-4

INTERNATIONAL SEARCH REPORT

International application No.
PCT/SE2004/001477

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 7
because they relate to subject matter not required to be searched by this Authority, namely:
see extra sheet
2. ☒ Claims Nos.: 8
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
see extra sheet
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/SE2004/001477

Box II.1 [Claim 7]:

Claim 7 relates to methods of treatment of the human or animal body by therapy or diagnostic methods practised on the human or animal body (PCT Rule 39.1(iv)). Nevertheless, a search has been executed for this claim. The search has been based on the alleged effects of the compounds or compositions.

Box II.2 [Claim 8]:

The expression "diseases or conditions in which inhibition of the enzyme MPO is beneficial" in claim 8 relates to a large and undefined number of different disorders which cannot be clearly defined by this expression. Claim 8 does therefore not meet the requirements of Article 6 PCT that claims shall be clear and concise, and in the present case a meaningful search over the whole of the claimed scope cannot be performed. Consequently, the search of claim 8 has been carried out only for the disorders mentioned in the description, page 2.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/SE 2004/001477

WO	03089430	A1	30/10/2003	CA	2449246 A	27/12/2002
				EP	1397038 A	17/03/2004
				SE	0201193 D	00/00/0000
				US	20040182325 A	23/09/2004
				BR	0214388 A	03/11/2004
				EP	1458541 A	22/09/2004
				SE	0202239 D	00/00/0000
				US	20040239005 A	02/12/2004

WO	9618400	A1	20/06/1996	AT	247655 T	15/09/2003
				AU	4527996 A	03/07/1996
				CA	2206804 A,C	20/06/1996
				DE	69531555 D,T	17/06/2004
				EP	0799040 A,B	08/10/1997
				IL	116382 D	00/00/0000
				JP	2001523213 T	20/11/2001
				US	5977119 A	02/11/1999
				US	6025361 A	15/02/2000
				US	6268373 B	31/07/2001

WO	02008237	A1	31/01/2002	NONE
----	----------	----	------------	------